

**GDAAC Notes for  
MODIS Technical Team Meeting (4/15/98)**

**ECS-SYSTEM**

**STATUS: YELLOW**

**Problem:** System installation, checkout and test procedures need to mature; documentation needs to be brought up to date; result is longer time to install/checkout new drops and additional patches applied to each drop (Yellow).

Drop 3 required updated PCF template to generate correct run-time path and file names. This patch has been applied and testing is in progress.

Patch applied to Drop 4 to address FTP and storage management problem.

- > Drop 4 checkout has ended; some tests have completed successfully, others have not; system assessment underway (4/15/98)
- Drop 3.03 in SSIT mode
- Drop 4.01 in Test mode

**SSIT**

**SSIT STATUS: YELLOW**

**•Problem:** System monitoring capability is rudimentary as SSIT proceeds resulting in trial and error troubleshooting (Yellow).

- > Scripts delivered from ECS to perform database cleanup and integrate several PGEs simultaneously. Checkout and testing of the scripts is continuing; early results indicate scripts are working. (4/15/98)
- DAAC has detailed two staff members to ECS/Landover to get insight into early interface testing of PGE04 and PGE05 into Drop 4.
- DAAC and SDST have refined CM process/procedures for PGEs to expedite redeliveries from TLCF, in an attempt to make it easier to conform to CM without sacrificing stability ("controlled chaos").
- Incomplete and outdated ECS documentation on SSIT procedures is extending the nominal time to integrate a PGE into the ECS (Yellow).

**MAPI**

**SSIT STATUS: YELLOW**

**Problem:** Error list documentation (see PGE01 description) (Yellow)

- > MAPI 2.3.1 received (4/6/98). Inspection, installation complete (4/13/98).

**SDST TK**

**SSIT STATUS: YELLOW**

**Problems:** Error list documentation (see PGE01 description) (Yellow)

**PGE01**

**SSIT STATUS: YELLOW**

**Problem:** DAAC cannot promote PGE to operations without error list documentation, lien pending; resolution schedule pending SDST communication with algorithm developers.(Yellow)

- Integration I complete (3/13/98); Integration II in progress (3/26/98).
- Updated PCF template installed to correctly specify path names at run time. Further testing underway.
- > Integration II complete (4/13/98)
- > V2.1 delivered (4/15/98)
- DAAC is providing (0.75 FTE) to assist with PGE01 functionality and optimization at SDST's request

**PGE02**

**SSIT STATUS: YELLOW**

**Problem:** Error list documentation (see PGE01 description). (Yellow)

- Integration II complete (3/18/98); Initial Error Testing complete (3/30/98); Additional error testing to be performed in chain testing.

**PGE03****SSIT STATUS: YELLOW**

Problem: Error list documentation (see PGE01 description). (Yellow)

- Integration I complete
- Integration II suspended; integration of PGE03 revealed ECS bug in handling ancillary data file types. ECS patch pending (4/9/98).
- > Integration II resumed; ECS patch delivered to recognize ancillary data types (4/13/98).

**PGE04****SSIT STATUS: YELLOW**

Problem: Error list documentation (see PGE01 description). (Yellow)

- Delivered (3/20/98); Inspection complete (3/30/98); Integration I complete (4/6/98).

**PGE05****SSIT STATUS: YELLOW**

Problem: Error list documentation (see PGE01 description). (Yellow)

- Delivered (3/16/98); Inspection completed (3/20/98); Integration I complete (4/7/98).

**PGE07****SSIT STATUS: YELLOW**

Problem: Error list documentation (see PGE01 description) (Yellow)

- > Production rules information received from SDST, Integration II pending successful integration of PGE01 (4/2/98).

**PGE08****SSIT STATUS: YELLOW**

Problem: Error list documentation (see PGE01 description) (Yellow)

- > Production rules information received from SDST, Integration II in progress (4/14/98).

**PGE11****SSIT STATUS: GREEN**

- Integration II pending successful integration of higher priority PGEs. (1,2,3)

**PGE12****SSIT STATUS: YELLOW**

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered (3/4/98); Inspection completed (3/5/98); Integration I completed (3/9/98)
- Integration II pending feedback from DAAC to SDST on implementation of production rule from level 1 and 2 PGEs.

**PGE13****SSIT STATUS: YELLOW**

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered 3/2/98; Inspection complete (3/13/98); Integration I in progress (3/18/98).

**PGE14****SSIT STATUS: YELLOW**

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered 2/27/98; Inspection complete (3/4/98); Integration I complete (3/9/98).
- Integration II pending feedback from DAAC to SDST on implementation of production rule from level 1 and 2 PGEs.

**PGE15****SSIT STATUS: YELLOW**

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered 2/24/98; PGE Inspection complete (3/6/98); Integration I complete (3/10/98)
- Integration II pending feedback from DAAC to SDST on implementation of production rule from level 1 and 2 PGEs.

## V2 SSIT AGREEMENT

- Document formally baselined (3/9/98)
- Modifications resulting from ongoing V2 SSIT being worked through CCR process.

## GDAAC/MODIS OPERATIONS AGREEMENT

- GDAAC developed draft, circulated for internal edits; edits being made by Stuart Frye. Stuart will be the active Point of Contact for revisions to the document until it is signed. Draft to MODIS & GDAAC for comment 3/2/98.

## GDAAC/MODIS SCIENCE AGREEMENT

- Need for this document was identified within the GDAAC while drafting the GDAAC/MODIS OA; this document will detail the working agreements between the GDAAC MODIS Data Support Team and the MODIS Science Team, including SDST. These interactions include QA metadata updates and interactions regarding fixes for failed PGEs, among others. Circulated for comment to MODIS & GDAAC 2/23/98.

## CONCERNS:

- Degree to which MODIS science software generates messages to provide information on error handling; notion that MODIS could deliver "silent code" to DAAC (i.e., no error messages) and just return it to SDST when it fails (problematic due to increased turnaround time; divergent from TL Working Agreement).

## OPERATIONAL READINESS

### PGEs into System Certification Tests

Best Case: 01, 02, 03, 04, 05, 07, 08, 11

Nominal Case: 01, 02, 03

Worst Case: L0 data ingest

### PGE Phase-in (tentative)

Sep 15	Sep 30	Oct 15	Oct 30	Nov 15
1	4	12	6*	9*
2	5	13	7	10*
3	11	14	8	

\*PGE delivery to DAAC pending

Work days for SSIT	Best Case	Nominal Case	Actual
Inspection	1	3	3 (n=11)
Integration I	2	5	6 (n=10)
Integration II	4 (est)	8-15 (est)	19 (n=2)
Patch	1-4	3-8	4 (n=12)
Error Testing	4	8	
Chain Testing	10	15	
Total	25	54	

Best Case: Little or no problems with ECS or PGE

Nominal Case: Minor problems encountered and resolved; no major blunders

Actual: Averages to date

Risk	Mitigation
Overhead associated with installation, checkout, regression testing of PGEs into incremental drops of ECS may reduce the number of PGEs available at launch.	DAAC gets early insight into future drops; fully integrate PGEs into stable, previous drop to gain experience, identify potential problems early and reduce uncertainty of at-launch system.
<p>The schedule for accomplishing the OREs is currently being revised due to changes in the ECS Drop delivery dates as well as the probable launch slip. We will provide the schedule as soon as it is available.</p> <p>The GDAAC's approach to Operational Readiness is based on having the Operations staff execute Operational Readiness Exercises (OREs). OREs are procedures which the Ops staff must be able to carry out in order to accomplish basic operations.</p>	OREs are divided into 2 classes, Launch Critical (LC) and Launch Essential (LE). The staff will concentrate on proficiency in the LC OREs first, then add the LEs as time permits. The LCs include support for production of PGEs 01, 02 & 03. Production of higher level products is covered in the LEs. The Certification Test will consist of the OREs which have been mastered at the start of testing, chained together into a 3 days-in-the-life scenario.

#### SSIT Status Codes:

- Complete** PGE is ready to process data at launch in validation mode or ops mode
- Green** No problems or Category 1 fixes only; either no liens on PGE or liens worked post-launch
- Yellow** Problems in test; Category 2 or 3 fix pending; liens placed on PGE with workoff schedule; liens worked off by launch
- Red** SSIT has stopped; PGE will not run in its current form; fix required before testing can continue

#### Categories of PGE fixes at the DAAC:

- Category 1:** GDAAC SSIT staff fix the problem in the DAAC baseline, report action to SDST and continue testing.
- Category 2:** SDST directs GDAAC SSIT staff, possibly based upon GDAAC recommendation, to fix the problem in the DAAC baseline and continue testing.
- Category 3:** GDAAC SSIT staff provides Baselined Algorithm Package to SDST to port back to TLCF for bug fixes and possible retesting. SDST then makes redelivery to DAAC.

#### Phases of SSI&T:

- Inspection:** Delivered Algorithm Package is inspected for contents and completeness. PGE is inspected for documentation, formats, file structures, and standards compliance.
- Integration-I:** PGE is built and run from the command line. Generated data product(s) are verified with SDST supplied comparison file(s). (DAACbuild for a library)
- Integration-II:** PGE is registered into ECS, including population of PDPS database. Test data is inserted into the Data Server for staging into production. PGE execution is planned and scheduled through ECS PDPS utilizing Autosys scheduler. Generated product(s) inserted into Data Server. Generated data product is retrieved from Data Server for verification.